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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/570,156

03/27/2006

Makoto Hirano

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OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

FORD, NATHAN K

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

06/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/570,156	Applicant(s) HIRANO ET AL.	
	Examiner NATHAN K. FORD	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/1/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicant's Response

Acknowledged is the applicant's request for continued examination received March 27, 2009. Claims 1 and 2 are amended.

The examiner accepts the applicant's assertion that the claim amendments overcome the 102 rejection to Todoroki. However, upon further search and consideration, a new rejection is submitted and elaborated below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Todoroki, JP 11-054593, wherein machine translation was used, in view of Suzuki et al., US 6,270,619.

Claims 1-2: Todoroki teaches the following [0015]:

- A substrate treatment chamber (40);
- A substrate holder (20) that can be inserted in the chamber [0018];
 - Wherein the holder comprises multiple stages arranged vertically;
- A substrate transfer unit (30) that conveys the substrates to the holder;
- A sensing device (50) for sensing a holding condition of the substrates within the holder [0020-22];
- A control device (80) which controls the transfer unit [0025, 0033-4].

Upon the detection of a broken substrate, operation ceases until the broken substrate is removed. Since Todoroki's sensing device can only establish that at least one substrate within the holder is broken and is incapable of locating the specific substrate manifesting the abnormality, time-consuming user intervention is required to identify and remove the defective wafer.

Hence, Suzuki is cited as providing a system which resolves the aforesaid flaws of the primary reference. Suzuki elaborates a semiconductor processing system that avails a cassette (C) for stacking wafers vertically (6, 45-55). Further, a monitoring device (112) attached to the cassette scans each disk to determine not only the holding condition of each wafer but its precise location (7, 14ff). This data is relayed to the operating computer, which in turn

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communicates with the wafer transfer robot to revise its transport operation as needed (9, 29ff). In this system, the site of the abnormal wafer is known; therefore, merely by programming the control means accordingly, the transfer robot can be rendered capable of removing those wafers disposed above and below the wafer identified as abnormal. A monitoring system capable of precisely identifying the defective wafer provides the advantage of continuing of wafer conveyance even if a wafer or multiple wafers are determined to occupy an abnormal holding condition, thereby eliminating downtime. Hence, it would have been obvious to one of ordinary skill in the art to outfit Todoroki's wafer cassette with the monitoring system limned by Suzuki to enable continuous wafer processing in the event of a broken wafer.

Claims 5-6: These claims are drawn to the intended use of the apparatus, and a recitation concerning the manner in which a claimed apparatus is to be employed does not differentiate the apparatus from prior art satisfying the claimed structural limitations (*Ex parte Masham*, 2 USPQ2d 1647). The transfer unit has the capacity to convey substrates singly.

Claims 7-8: These claims are drawn to the intended use of the apparatus as well. As Figure 3 depicts, the transfer unit (31) possesses multiple support arms which permit the conveyance of multiple substrates in a normal holding condition. If desired, the robot can also be used to transport one substrate at a time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan K. Ford whose telephone number is 571-270-1880. The examiner can normally be reached on M-F, 8:30-5:00 EDT. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland, can be reached at 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/N. K. F./

Examiner, Art Unit 1792

/Karla Moore/

Primary Examiner, Art Unit 1792